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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,160	10/30/2000	Thomas C. Harrop	50671-P012US-10004457	1336
22878	7590	01/05/2006	EXAMINER	
AGILENT TECHNOLOGIES, INC. INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT. P.O. BOX 7599 M/S DL429 LOVELAND, CO 80537-0599			PWU, JEFFREY C	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,160

Applicant(s)

HARROP, THOMAS C.

Examiner

Jeffrey C. Pwu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/13/05 Amendment.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53,55 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53,55 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112^{1st}

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The closure lacks clear written description in the description of how to initiate an action for preventing performance problem occurring in an attempt to prevent the future network-wide performance problem.

Claim Rejections - 35 USC § 112nd

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 is vague and indefinite because it is unclear how to correlate the real-time status information with one previously defined rule.

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5. Claim 6 recites the limitation " that foreshadows the occurrence " in claim 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-53 and 55-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Brockel et al. (U.S. 6,058,260).

Brockel et al. teach:

Claim 1: A method of managing a network comprising the steps of:

polling resources of the network to gather real-time status information about the network; (1; "traffic input")

evaluating performance of the network by identifying network-wide patterns in the gathered real-time status information; (2; "a traffic database of a traffic forecast means 2, said traffic forecast means 2 having a plurality of traffic algorithms, in order to store a plurality of traffic data, predicted traffic network data and network performance parameters" at col.6, lines 34-55) and

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based on the result of said step of evaluating, providing a prediction of a future network-wide performance problem. ("The control portion of the method of the present invention entails managing a communications network 9. During a forecast updating step, a model correction means 10 continuously provides a plurality of real-time meteorological measurements, indicated by arrow 12, to said propagation forecasting means 5, as well a plurality of radio traffic measurements, indicated by arrow 11, from said network 9 to said traffic forecast means 2, resulting in said propagation forecast means 5 and said traffic forecast means 2, respectively, providing an adjusted propagation forecast, indicated by arrow 14, and an adjusted traffic forecast, indicated by arrow 13, to said plurality of planning algorithms of the network planning means 7." at col. 6, lines 55-68)

Claim 2: The method of claim 1 further comprising the step of: determining an action for preventing the future network-wide performance problem from occurring. ("The present invention also provides for an automated communications network planner apparatus for converting meteorological data and traffic data into a dynamic network model meeting a plurality of predetermined performance parameters on a display means. The apparatus creates a dynamic network model based on propagation and traffic forecasts and then updating and adjusting the network model based on updated real-time propagation and traffic data inputs provided to a network planning means by a means for determining model corrections and a number of algorithms." at Col.4, lines 47-56)

Claim 3: The method of claim 2 wherein said determining step includes determining the action

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from at least one previously defined rule. (70; “propagation forecast”)

Claim 4: The method of claim 2 further comprising the step of:

initiating the said action before the future network-wide performance problem occurring in an attempt to prevent the future network-wide performance problem. (as closely interpreted by the examiner, Brockel teaches a propagation forecast 70, an equipment availability and characteristics input, indicated by arrow 68, from said network 100 through the model correction means 110, which will be combined with a projected link reliability factor, indicated by arrow 69, for transmission of said propagation forecast output, arrow 71, to a plurality of planning algorithms of said network planning means 75. Said plurality of planning algorithms of the network planning means 75 will calculate the propagation reliability of communications links of said network 100 during said network planning step, which is one of the upcoming steps of the method of this invention; col.9, line 1-)

Claim 5: The method of claim 1 wherein said step of evaluating performance of the network further includes:

correlating the real-time, status information with at least one previously defined rule. (60, 59, also see flow chart of figs. 1 & 2 of the correlating the real-time, status information having forecast/predefined rule.)

Claim 6: The method of claim 5 wherein the at least one previously-defined, rule defines a

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known pattern for the gathered real-time status information that foreshadows the occurrence of the future network-wide performance problem.

Claim 7: The method of claim 1 wherein the future network-wide performance problem is caused by anyone or more of the problems selected from:

operability problem of the resources of the network operability problem of the network, failure of the resources of the network, failure of the network, integrity problem of the resources of the network integrity problem of the network, efficiency problem of the resources of the network, efficiency problem of the network, decreased processing speed of the resources of the network, decreased processing speed of the network, usage capacity problem of the resources of the network, and usage capacity problem of the network. (col.16, lines 17-35)

Claim 8: The method of claim 1 wherein said step of polling resources includes gathering the real-time status information for anyone or more of:

network status, disk status, database status, memory status, CPU status, and operating system status. (55, 56)

Claim 9: The method of claim 1 wherein said step of polling resources gathering step includes gathering the real-time status information by a plurality of distributed gateways that are communicatively coupled to a central management system. ("In operation during said network planning step, said network planning means 75 automatically examines pieces of said network

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100 on a one-by-one basis in order to speed up the resulting calculations, and either apportions sections of said network 100 to a network manager or amasses portions into super nodes, usually through a plurality of gateway links. Thus during said network planning step, both the operator and said network planning means 75 engineer a network plan output, indicated by arrow 80, to meet said performance parameters of the network 100.”; at col.10, lines 15-25)

Claim 10: The method of claim 3 wherein said-providing the at least one previously defined rule includes at least one user defined rule. (it inherent that the rules or planning steps are being defined by users)

Claim 11: The method of claim 3 wherein the at least one previously defined rule is implemented as software code executing on a management system. (abstract; “artificial intelligence program”)

Claim 12: The method of claim 3 further comprising: the at least one previously defined rule correlating disparate network elements. (col.10, lines 15-25)

Claim 13: The method of claim 3 further comprising:

the at least one previously defined rule correlating disparate characteristics of the resources of the network. (abstract)

Claim 14: The method of claim 13 wherein said disparate characteristics include those selected from: CPU run queue capacity, CPU run queue blocks, CPU run queue waits, context switching, memory paging, swap allocation, disk writes, disk blocking, disk waiting, disk utilization, network inbound packets, network outbound packets, network errors, and network collisions. (8, 9, 10, 15)

Claim 15: A system for managing a network, said system comprising:

at least one polling gateway that is operable to poll one or more network elements to gather real-time status information for said one or more network elements;

at least one processor-based management server communicatively coupled to the at least one polling gateway to receive the gathered real-time status information from said at least one polling gateway; and the at least one processor-based management server predicting the occurrence of a network-wide performance problem within the network based on the gathered real-time status information. (claim 15 is similarly rejected as in claims 1-14)

Claim 16: The system of claim 15 wherein said one or more network elements include a plurality of network elements distributed in the network. (claim 16 is similarly rejected as in claims 1-14)

Claim 17: The system of claim 15 wherein said one or more network elements include a

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plurality of disparate network elements.

Claim 18: The system of claim 15 wherein said at least one polling gateway includes a plurality of distributed polling gateways. (claim 18 is similarly rejected as in claims 1-14)

Claim 19: The system of claim 15 wherein said plurality of distributed polling gateways include polling gateways that are each operable to poll particular ones of disparate network elements. (claim 19 is similarly rejected as in claims 1-14)

Claim 20: The system of claim 19 wherein said disparate network elements include network elements that communicate in different network protocols. (claim 15 is similarly rejected as in claims 1-14)

Claim 21: The system of claim 20 wherein said disparate network elements include network elements selected from: SNMP network elements, CMIP network elements, and network elements using TCP/IP protocol. (90, 100, via gateway links)

Claim 22: The system of claim 15 wherein at least one rule defines an action for said at least one processor-based management server to respond to a defined condition being detected. (claim 22 is similarly rejected as in claims 1-14)

Claim 23: The system of claim 22 wherein said action is an action for attempting to prevent the network-wide performance problem predicted by the detection of said defined condition from occurring. (claim 23 is similarly rejected as in claims 1-14)

Claim 24: The system of claim 22 wherein upon detection of said defined condition, said at least one processor-based management server initiates said action before said network-wide performance problem occurring. (claim 24 is similarly rejected as in claims 1-14)

Claim 25: The system of claim 15 wherein at least one rule defines a known pattern for status information that foreshadows the occurrence of said network-wide performance problem. (claim 25 is similarly rejected as in claims 1-14)

Claim 26: The system of claim 15 wherein at least one rule defines statistical analysis of said status information that foreshadows the occurrence of said network-wide performance problem. (claim 26 is similarly rejected as in claims 1-14)

Claim 27: The system of claim 15 wherein at least one rule defines a known correlation of status information that foreshadows the occurrence of said network-wide performance problem. (claim 27 is similarly rejected as in claims 1-14)

Claim 28: The system of claim 15 wherein said network-wide performance problem is caused by anyone or more of the problems selected from:

operability problem of said one or more network elements, operability problem of the network, failure of said one or more network elements, failure of the network, integrity problem of said one or more network elements, integrity problem of the network, efficiency problem of said one or more network elements, efficiency problem of the network, decreased processing speed of said one or more network elements, decreased processing speed of the network, usage capacity problem of said one or more network elements, and usage capacity problem of the network.

(claim 28 is similarly rejected as in claims 1-14)

Claim 29: The system of claim 15 wherein said status information includes one or more from: network status, disk status, database status, memory status, CPU status, and operating system status. (claim 29 is similarly rejected as in claims 1-14)

Claim 30: A management system for managing one or more layers of a network, wherein said managing includes predicting network-wide performance problems that are to occur within one or more layers of the network and taking responsive actions in an attempt to prevent or timely respond to the predicted said network-wide performance problems, said management system comprising:

at least one processor-based management server communicatively coupled to at least one polling

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gateway that is operable to poll at least one network element to gather real-time status information for said at least one network element;

the at least one processor-based management server including software code executing thereon, wherein said software code learns a condition for predicting said network-wide performance problem within one or more layers of the network from said gathered real-time status information to enable the processor-based management server to predict the occurrence of said network-wide performance problem within the network. (claim 30 is similarly rejected as in claim 1)

Claim 31: The management system of claim 30 wherein said at least one network element include a plurality of said at least one network element elements distributed in the network. (claim 31 is similarly rejected as in claims 1-14)

Claim 32: The management system of claim 30 wherein said at least one network element elements include a plurality of disparate said at least one network element elements. (claim 32 is similarly rejected as in claims 1-14)

Claim 33: The management system of claim 30 wherein said at least one polling gateway includes a plurality of distributed polling gateways. (claim 33 is similarly rejected as in claims 1-14)

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Claim 34: The management system of claim 30 wherein said plurality of distributed polling gateways include polling gateways that are each operable to poll particular ones of disparate said at least one network element elements. (claim 34 is similarly rejected as in claims 1-14)

Claim 35: The management system of claim 34 wherein the disparate said at least one, network element elements include said at least one network element elements that communicate in different network protocols. (claim 35 is similarly rejected as in claims 1-14)

Claim 36: The management system of claim 35 wherein the disparate said at least one network element include said at least one network element selected from: SNMP network elements, CMIP network elements, and network elements using TPC/IP protocol. (90, 100, via gateway links)

Claim 37: The management system of claim 30 wherein at least one rule defines an action for said at least one processor-based management server to take in response to said condition being detected. (claim 37 is similarly rejected as in claims 1-14)

Claim 38: The management system of claim 37 wherein said action is an action for attempting to prevent the network-wide performance problem predicted by the detection of said condition from occurring. (claim 38 is similarly rejected as in claims 1-14)

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Claim 39: The management system of claim 37 wherein upon detection of said defamed condition said at least one processor-based management server initiates said action before said network-wide performance problem occurs. (claim 3 is similarly rejected as in claims 1-14)

Claim 40: The management system of claim 30 wherein said learned condition includes a pattern for status information that foreshadows the occurrence of said network-wide performance problem. (claim 40 is similarly rejected as in claims 1-14)

Claim 41: The management system of claim 30 wherein said learned condition includes statistical analysis of said status information that foreshadows the occurrence of said network-wide performance problem. (claim 41 is similarly rejected as in claims 1-14)

Claim 42: The management system of claim 30 wherein said leaned condition includes correlation of status information that foreshadows the occurrence of said network-wide performance problem. (claim 42 is similarly rejected as in claims 1-14)

Claim 43: The management system of claim 30 wherein said network-wide performance problem is caused by anyone or more of the problems selected from:

operability problem of said at least one network element, operability problem of the network, failure of said at least one network element, failure of the network, integrity problem of said at

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least one network element, integrity problem of the network, efficiency problem of said at least one network element, efficiency problem of the network, decreased processing speed of said at least one network element, decreased processing speed of the network, usage capacity problem of said at least one network element, and usage capacity problem of the network. (claim 43 is similarly rejected as in claims 1-14)

Claim 44: The management system of claim 30 wherein said status information includes one or more from: network status, disk status, database status, memory status, CPU status, and operating system status. (claim 44 is similarly rejected as in claims 1-14)

Claim 45: The management system of claim 30 wherein said at least one network element is represented as an object within object-oriented software executing on the processor-based server, said object having one or more attributes for which said status information may be gathered. (col.17, lines 5-26)

Claim 46: The management system of claim 45 wherein said -teamed condition includes correlation of one or more attributes of one or more objects to define the prediction of said network-wide performance problem. (claim 46 is similarly rejected as in claims 1-14)

Claim 47: The management system of claim 30 wherein said management system includes a business management layer. (fig.1)

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Claim 48: The management system of claim 47 wherein said network-wide performance problem includes a business performance problem. (“real-time weather”, “model correction”)

Claim 49: The management system of claim 48 wherein said at least one network element includes an electronic commerce system for processing commercial transactions with customers via the Internet, and wherein said business performance problem includes a problem resulting in inability of said electronic commerce system processing said commercial transactions. (abstract)

Claim 50: The management system of claim 30 wherein said management system includes a service management layer. (abstract)

Claim 51: The management system of claim 50 wherein said network-wide performance problem includes a service performance problem. (“real-time weather”, “model correction”)

Claim 52: The management system of claim 51 wherein said service performance problem includes problem with the Quality provided to subscribers or clients of the managed network.
(col.2, line 1-)

Claim 53: The management system of claim 30 wherein said management system includes a network management layer. (col.2, line s1-37)

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Claim 55: The management system of claim 30 wherein said management system includes an element management layer. (col.2, line s1-37)

Claim 56: The management system of claim 55 wherein said network-wide performance problem includes a network element performance problem. (“real-time weather”, “model correction”)

Claim 57: The management system of claim 30 wherein said management system includes a plurality of at least the following layers: business management layer, service management layer, network management layer, and element management layer, and wherein a plurality of said layers are correlated within said at least one rule. (col.2, line s1-37)

Claim 58: The management system of claim 30 wherein said management system includes a plurality of at least the following layers: business management layer, service management layer, network management layer, and element management layer, and wherein said network-wide performance problem is a problem within any of said plurality of layers. (col.2, line s1-37)

Response to Arguments

8. Applicant's arguments with respect to claims 1-53 and 55-56 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey C. Pwu whose telephone number is 571-272-6798.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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1/4/06

JEFFREY PWU
PRIMARY EXAMINER